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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/667,566	09/22/2000	Takafumi Nakamura	197689US2	9678

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EXAMINER

DI GRAZIO, JEANNE A

ART UNIT PAPER NUMBER

2871

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

09/667,566

Applicant(s)

NAKAMURA ET AL.

Examiner

Jeanne A. Di Grazio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-12 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 and 13-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 7-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Priority

Priority to Japanese Patent Application Nos. 11-271173 (Sept. 24, 1999) and 2000-281164 (Sept. 18, 2000) is claimed.

Election/Restrictions

In response to the Restriction Requirement, Applicant provisionally elects Group II, Claims 7-12 without traverse, drawn to a flat display including a substrate array classified in class 349, subclass 39.

Claim Objections

Claim 7 is objected to as reciting confusing language. Specifically, the recitations of first, second, and third wiring layers is not clear. The recitation "vertically formed on different layers" is interpreted to mean that the layers are formed in a vertical manner relative to each other.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7-11 rejected under 35 U.S.C. 102(b) as being anticipated by Watanabe et al. (US 5,691,793).

Per claims 7-11: Watanabe discloses a liquid crystal display apparatus wherein capacitor electrodes are fed by a common capacitor line (Figures 4A and 4B, entire patent). Turning to Figures 4A and 4B, Watanabe has a conductive pattern (reference item 421) that is connected to

a pixel electrode (reference item 7). In Watanabe, the conductive pattern 421 reaches the underside of the pixel electrode and is above the gate insulating film (reference item 403) thereby satisfying Applicant's first wiring layer connected to an auxiliary capacity electrode, a second wiring layer connected to said switching elements and said first wiring layer; and a third wiring layer connected to an upper electrode connected to said pixel electrode and said switching elements, and wherein said first and second wiring layers are vertically formed on different layers as shown in Figures 4A and 4B and entire patent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (US 5,691,793) in view of Jung et al. (US 6,317,173 B1).

Per claim 12: Watanabe does not appear to specify that a channel area of the switching element, said auxiliary capacity electrode, and said first wiring layer are formed using polycrystalline silicon.

Jung teaches thin film transistors of polycrystalline silicon (Col. 1, Lines 45-51), a polycrystalline silicon layer formed on an insulating substrate and a gate insulating film of silicon dioxide or SiN_x (Col. 6, Lines 36-39), and polycrystalline storage capacitor (Col. 1, Lines 52-53). Jung teaches that these elements are conventional in liquid crystal displays and in are

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used in a liquid crystal display device for sufficient storage capacitance (Jung, column 2, lines 12-13).

Jung is evidence that one of ordinary skill in the art of liquid crystals would have had the reason, suggestion, and motivation to manufacture transistors, insulating layers, and capacitors of polycrystalline silicon in a conventional display and for sufficient storage capacitance.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Watanabe in Jung for sufficient storage capacitance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (703)305-7009.

The examiner can normally be reached on M-F.

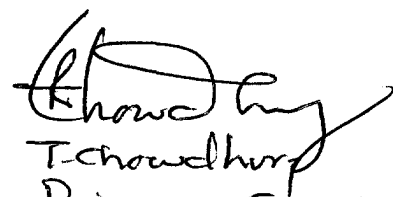
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, SPE can be reached on (703) 305-3492. The fax phone number for the organization where this application or proceeding is assigned is (703)746-8741.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Jeanne Andrea Di Grazio

Robert Kim, SPE

JDG


T. Chowdhury
Primary Examiner